WP7
Budapest

Network Status

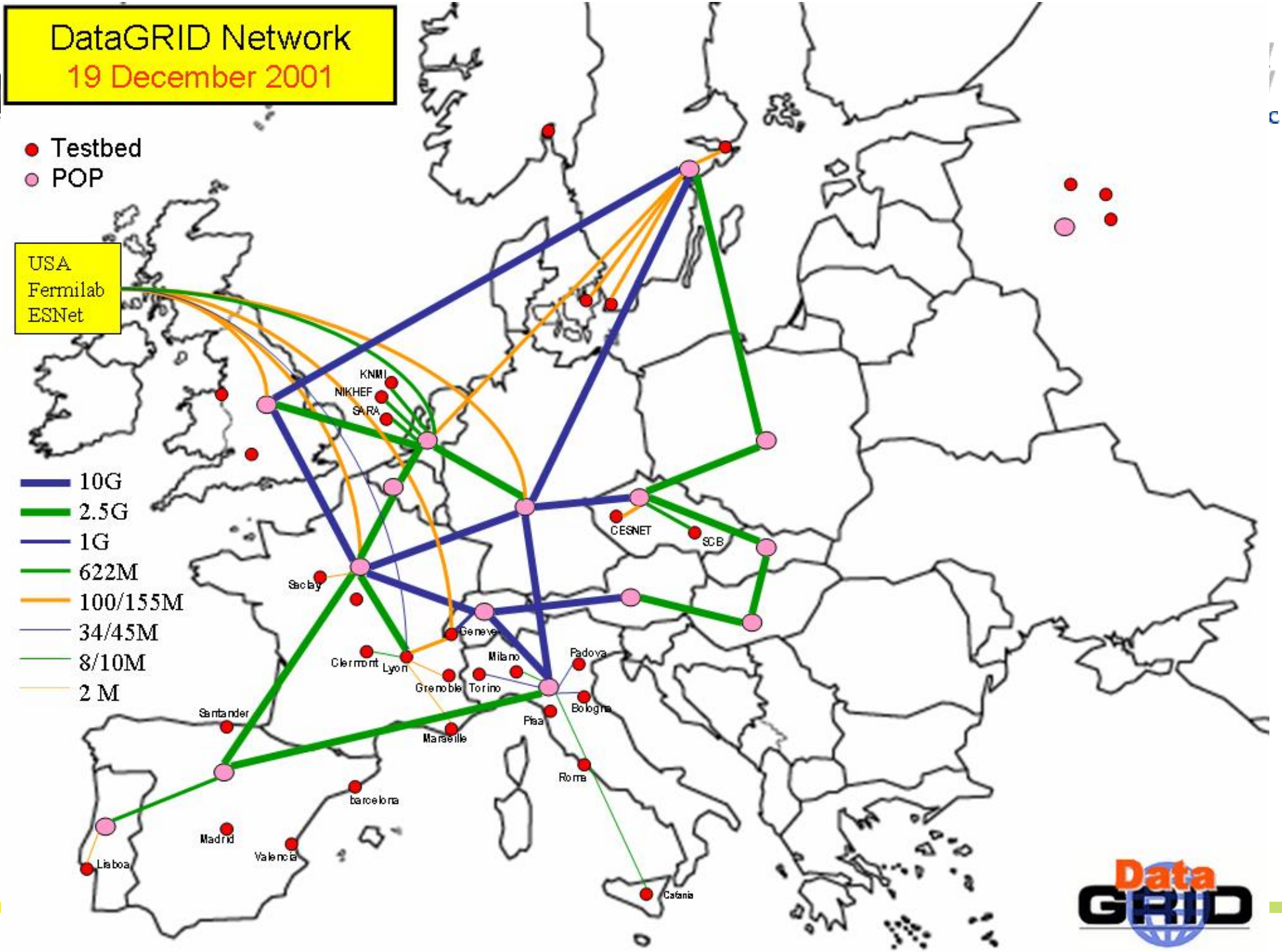
Monitoring & R-GMA

GridFTP Logging

Network Cost Function

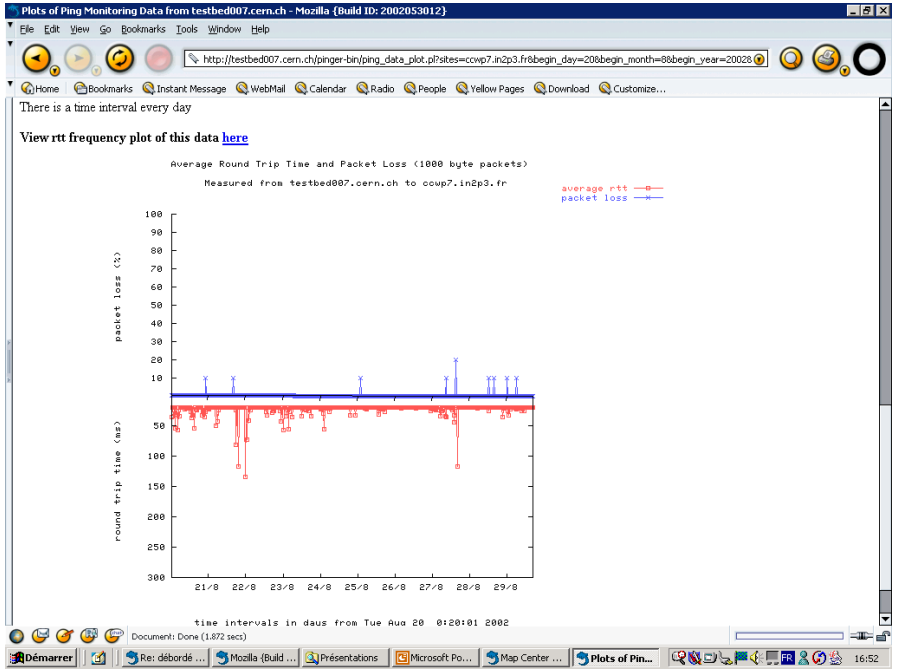
MapCenter & TopoGRID

Firewall issues


DataGRID Network
19 December 2001
Testbed
POP
USA
Fermilab
ESNet
10G
2.5G
1G
622M
100/155M
34/45M
8/10M
2 M
KNMI
NIKHEF
SARA
CESNET
SCB
Saclay
Geneve
Clermont
Lyon
Grenoble
Torino
Milano
Padova
Bologna
Pisa
Roma
Marseille
Santander
barcelona
Madrid
Valencia
Lisboa
Catania

Monitoring & R-GMA

- Tools deployed on one node o f each testbed site, accessible by Web browser
  - Edg-pinger, edg-iperf & edg-udpmon



NMMeasureId=tool:pinger/packetsize:100/metric:loss, DestHost=testbed007.cern.ch, SourceHost=ccwp7.in2p3.fr, nmId=ccwp7.in2p3.fr/pinger, hn=urec-glob.ens-lyon.fr,Mds-Vo-name=local,o=grid
- objectClass: NetworkMeasurement ;
- SourceHost: ccwp7.in2p3.fr ;
- DestHost: testbed007.cern.ch ;
- MonitorTool: pinger ;
- NMMeasureId: tool:pinger/packetsize:100/metric:loss ;
- MetricName: loss ;
- MetricValue: 9.09090909090909 ;
- MetricUnit: ms ;
- MetricTime: 20020829134446Z ;
- Parameter: packetsize:100 ;

- Publication of metrics in MDS
- Tests ongoing on publishing metrics in R-GMA (TB2)

GridFTP logging

- Logging of all file transfers
  - CE-CE
  - CE-SE
  - SE-SE (replication)
- Publication of metrics in MDS in release 1.3
- Publication in R-GMA in release 2
- Used by network cost function

Network Cost Function

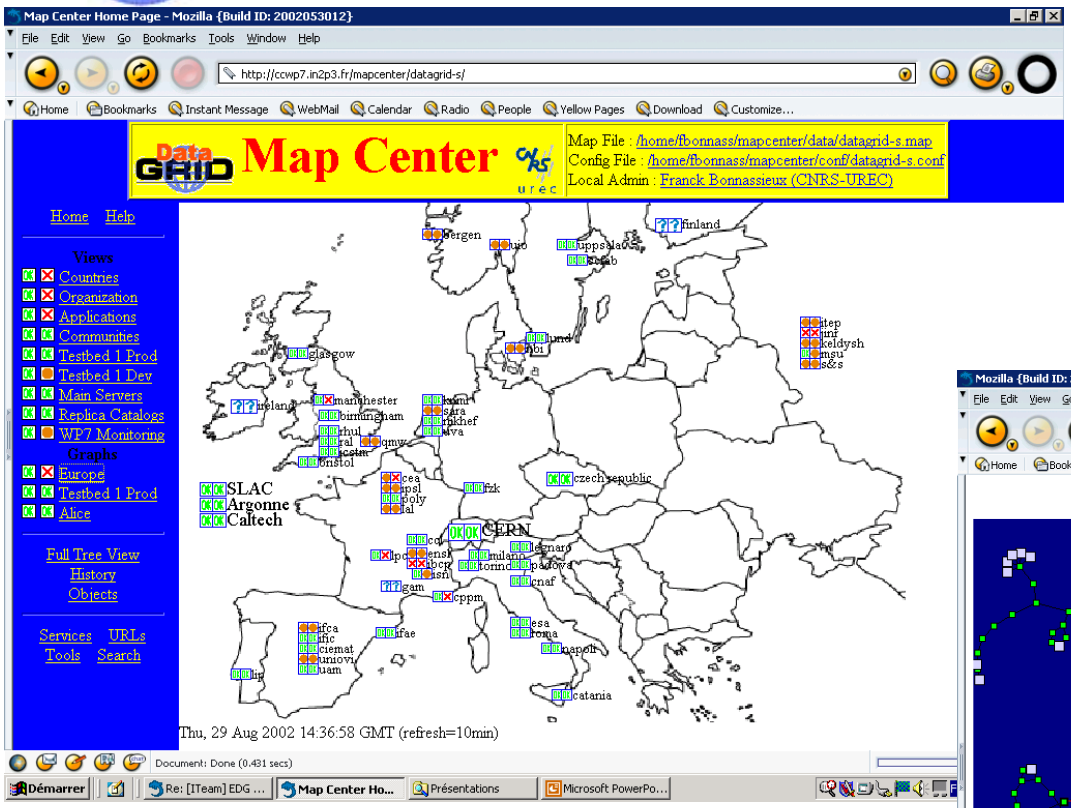
- Function used by Resources brokers and Replica Managers to optimize grid resources usage

  getNetworkCosts(SE1, SE2, size) = time (and confidence level)

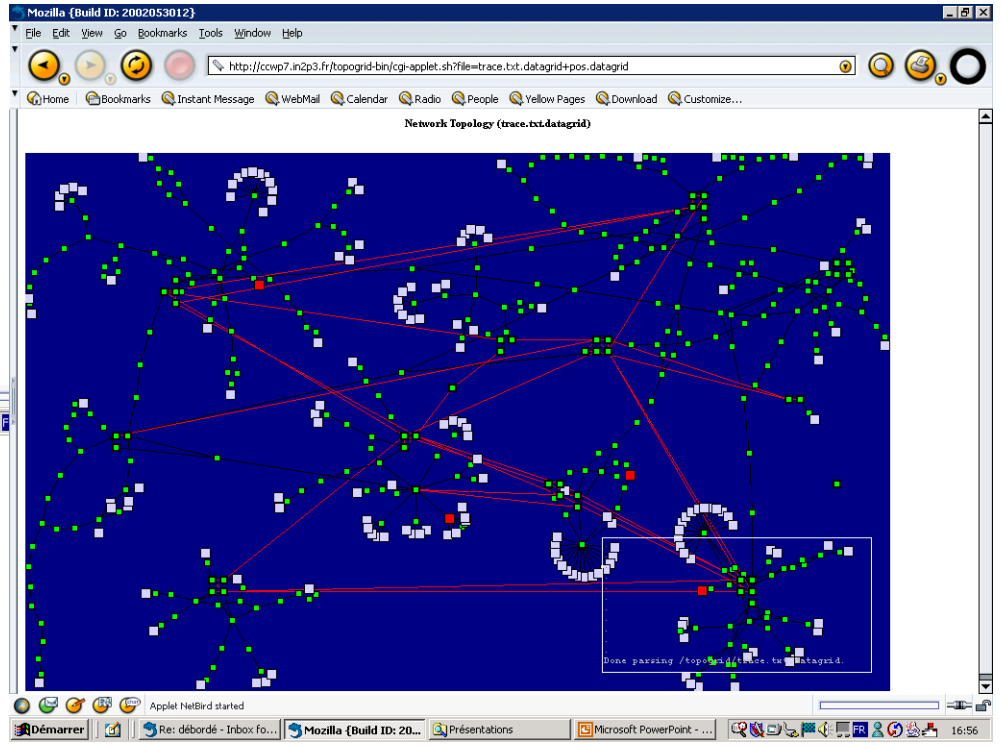
- Exist in release 1.3 but will certainly not be used before release 2

- Compute from TCP throughput measurement (iperf), and also from GridFTP logging for next release

MapCenter & TopoGRID (ccwp7.in2p3.fr)



- New automatic version
- Queries each night from MDS/RB



- Experimental product
- Static & automatic version

Firewall issues

- Static ports

Software	Service	Port	Type	Computing Element	Storage Element	Ressource Broker	Replica Catalog	User Interface	Working Node	WP7 Mon. Node
System	SSH	22	TCP							
System	HTTP	80	TCP							
System	NTP	123	UDP							
DataGRID	GDMP Iteam VO	2000-2006	TCP							
Globus	Gatekeeper	2119	TCP							
Globus	GRIS+GIIS (MDS	2135	TCP							
DataGRID	Information Index	2170	TCP							
Globus	GridFTP	2811	TCP							
Iperf	TCP TEST Traffic	5001	TCP							
DataGRID	Resource Broker	7771	TCP							
DataGRID	Logging & Bookk	7846	TCP							
DataGRID	JSS Client	8881	TCP							
DataGRID	JSS Server	9991	TCP							
DataGRID	Replica Catalog	9011	TCP							
UDPmon	UDP TEST Traffic	14233	UDP							

- Dynamic ports used by globus (job submission, gridftp, …)
  - above 1024
  - can be restricted to a range

    Variable GLOBUS_TCP_PORT_RANGE

    50000 to 51000 recommended